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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,477	07/23/2003	Martin Keller	564462008100	3798

45975 7590 12/06/2006

DIVERSA C/O MOFO S.D.
12531 HIGH BLUFF DRIVE
SUITE 100
SAN DIEGO, CA 92130-2040

EXAMINER	
LU, FRANK WEI MIN	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,477	KELLER, MARTIN	
	Examiner	Art Unit	
	Frank W. Lu	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36,39 and 40* is/are pending in the application.

4a) Of the above claim(s) *14,18,19 and 22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,15-17,20,21,23-36,39 and 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/04, 7/04, and 10/04*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-36, and species (1) (claim 13), (5) (claim 17), and (7) (claim 21) in the reply filed on September 13, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Since claim 19 is dependent on claim 18, claims 1-13, 15-17, 20, 21, 23-36, 39, and 40 will be examined.

Drawings

2. Some words in Figures 26a, 26b, and 26c are unclear. Applicant is required to submit new Figures 26a, 26b, and 26c in response to this office action.

Specification

3. The disclosure is objected to because of the following informality: since now cases 08/876,276, 09/975,036 and 10/145,281 are abandoned while case 09/985,432 now is US Patent NO. 6,483,536, applicant is required to update these information in the first sentence of the specification.

Appropriate correction is required.

Claim Objections

4. Claim 8 is objected to because of the following informality: "a cell" should be "the cell".

5. Claim 10 or 12 is objected to because of the following informality: "the cells" should be "the cell" in order to correspond to claim 1.

6. Claim 23 is objected to because of the following informality: "the cells" should be "the cell".

7. Claim 30 is objected to because of the following informality: "FACS" is an abbreviation. It can only be used after whole phrase representing "FACS" appears once.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-13, 15-17, 20, 21, 23-36, 39, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 1 or 2 or 5 or 39 or 40 is rejected as vague and indefinite in view of the preamble because, if cells are uncultivated, it is unclear how to isolate and/or maintaining the cells. Please clarify.

11. Claim 4 is rejected as vague and indefinite because it is unclear that epothilone is used to further limit myxobacteria or is an another environment sample. Please clarify.

12. Claim 9 is rejected as vague and indefinite because a plant cell, a mammalian cell, an insect cell are not a microorganism. Please clarify.

13. Claims 25 and 26 are rejected as vague and indefinite. Since claims 1 and 23 do not require to form a gel microdroplet, it is unclear how to isolate a gel microdroplet as recited in claim 25 and how to isolate a microcolony from the gel microdroplet as recited in claim 26. Please clarify.

14. Claims 28 and 29 are rejected as vague and indefinite. Since claims 1, 23, and 25 do not require to form an encapsulated microcolony, it is unclear how to isolate a gel microdroplet comprises sorting an encapsulated microcolony by size as recited in claim 28 and how to sort an encapsulated microcolony by size comprises using flow cytometry as recited in claim 29. Please clarify.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. Claims 1, 5, 6, 8-10, 21, 35, 36, 39, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Peterson *et al.,* (US Patent No. 5,783,431, filed on October 24, 1996).

Regarding claims 1, 39, and 40, since according to dictionary, "column" is a supporting pillar consisting of a base, cylindrical shaft, and a capital, Peterson *et al.,* teach encapsulating in a microenvironment at least a single cell (ie., individual or pools of library cells) from the mixed

population (ie., the DNA library), placing the encapsulated cell in a growth column (ie., a sterile flask); and incubating the encapsulated cell in the growth column under conditions allowing the encapsulated cell to survive and/or be maintained, thereby isolating (ie., sorting the encapsulated cells) and/or maintaining the cell (see columns 42-44).

Regarding claims 5 and 6, Peterson *et al.,* teach that the mixed population of cells comprises a mixture of materials (ie., the DNA library) as recited in claim 5 and the mixture of materials comprises a biological sample (ie., *E. coli*), soil or sludge as recited in claim 6 (see column 42).

Regarding claims 8-10, Peterson *et al.,* teach that the cell comprises a microorganism (ie., *E. coli*) as recited in claim 8 wherein the microorganism comprises a bacterial cell (ie., *E. coli*), a yeast cell, an archaeal cell, a plant cell, a mammalian cell, an insect cell or a protozoan cell as recited in claim 9 and the cell comprises extremophile (ie., spores for *Streptomyces* species) (see column 42). Since it is known that a spore is a small, usually single-celled reproductive body that is highly resistant to desiccation and heat and is capable of growing into a new organism, produced especially by certain bacteria, fungi, algae, and nonflowering plants, Peterson *et al.,* teach the extremophile (ie., spores for *Streptomyces* species) is selected from the group consisting of hyperthermophile, psychrophile, halophiles, psychrotrophs, alkalophiles, and acidophiles as recited in claim 10.

Regarding claim 21, Peterson *et al.,* teach that the conditions allowing the encapsulated cell to survive and be maintained comprise providing nutrients at in situ concentrations (ie., standard culture conditions for encapsulated library cells) (see column 43, first paragraph).

Regarding claims 35 and 36, since claims 35 and 36 do not require to amplify nucleic acid from the encapsulated cell by a specific technique and Peterson *et al.*, teach to culture the encapsulated cell to produce more encapsulated cells which contains more nucleic acids (see column 44, second paragraph), Peterson *et al.*, disclose direct amplification of nucleic acid from the encapsulated cell as recited in claim 35 and direct amplification of nucleic acid from the cultivated encapsulated cells as recited in claim 36.

Therefore, Peterson *et al.*, teach all limitations recited in claims 1, 5, 6, 8-10, 21, 35, 36, 39, and 40.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (US Patent No. 4,801,529, published on January 31, 1989) in view of Peterson *et al.*.

Regarding claims 1, 38, and 39, Perlman teaches encapsulating in a microenvironment at least a single cell from the mixed population (ie., microorganisms from agricultural or industrial environments) and incubating the encapsulated cell under conditions allowing the encapsulated cell to survive and/or be maintained, thereby isolating and/or maintaining the cell (see column 2 and 3 and claim 1 in claim 14).

Regarding claims 2-6, 8, and 9, Perlman teaches that the mixed population of cells comprises an environmental sample (microorganisms from agricultural or industrial environments) as recited in claim 2 (see column 2, lines 30-67) wherein the environmental sample is selected from the group consisting of: eukaryotes, prokaryotes, myxobacteria (epothilone), air, water, sediment, soil and rock as recited in claim 4 (see claims 16-18 in column 16), the mixed population of cells comprises a mixture of materials (ie., mutant and non-mutant microorganisms) as recited in claim 5 (see claim 1 in column 14), the mixture of materials comprises a biological sample (ie., microorganisms from agricultural or industrial environments), soil or sludge as recited in claim 6, and the cell comprises a microorganism as recited in claim 8 (see column 2, lines 30-67) wherein the microorganism comprises a bacterial cell, a yeast cell, an archaeal cell, a plant cell, a mammalian cell, an insect cell or a protozoan cell as recited in claim 8. Since the microorganisms taught by Perlman includes bacteria, Perlman discloses that the microorganism comprises a bacterial cell, a yeast cell, an archaeal cell, a plant cell, a mammalian cell, an insect cell or a protozoan cell as recited in claim 9. Since

the industrial environment taught by Perlman must include industrial sites, claim 3 is anticipated by Perlman.

Regarding claims 10 and 11, since Perlman teaches that mutant microorganism has increased thermal stabilities (see column 10, second paragraph), Perlman discloses that the cell comprise extremophile wherein the extremophile is hyperthermophile as recited in claims 10 and 11.

Regarding claims 12, 13, 15, and 16, Perlman teaches that the cell is encapsulated in a porous gel microdroplet (GMD) as recited in claim 12 wherein the porous gel microdroplet (GMD) comprises a hydrogel matrix or a selectively permeable membrane (ie., the gel coated microcapsule having a semi-permeable membrane) and one cell is encapsulated in each porous gel microdroplet (GMD) as recited in claim 12 and one to four cells is encapsulated in each porous gel microdroplet (GMD) as recited in claim 13 (see column 2, lines 29-67).

Regarding claim 21, Perlman teaches that the conditions allowing the encapsulated cell to survive and be maintained comprise providing nutrients at in situ concentrations (ie., appropriate culture conditions for encapsulated microcapsule) (see column 2, lines 29-67).

Regarding claims 23 and 24, since Perlman teaches that the microdroplet or microcapsule is cultured for a sufficient time to enable the individual or small number of microorganisms to multiply and form microcolonies (see column 7, third paragraph and claims 10 and 11 in column 15), it is obvious to one having ordinary skill in the art at the time the invention to incubate and culture the encapsulated cell under conditions allowing growth or proliferation of the cells into a microcolony comprising at least two daughter cells as recited in claim 23 wherein the microcolony comprises between about 4 and 100 cells as recited in claim 24.

Regarding claim 25-27, Perlman teaches isolating a gel microdroplet (ie., gel coated microcapsules) as recited in claim 25, isolating a microcolony from the gel microdroplet as recited in claim 26, and isolating a cell from the microcolony as recited in claim 27 (see column 2, lines 29-67).

Regarding claim 28, Perlman teaches isolating a gel microdroplet comprises sorting an encapsulated microcolony by size (see column 2, last paragraph and column 3, second paragraph).

Perlman does not disclose placing and incubating the encapsulated cell in a growth column as recited in claims 1, 39, and 40.

Since according to dictionary, "column" is a supporting pillar consisting of a base, cylindrical shaft, and a capital, Peterson *et al.,* placing and incubating the encapsulated cell in the growth column (ie., a sterile flask) as recited in claims 1, 39, and 40 (see columns 42-44).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have placing and incubating the encapsulated cell in the growth column (ie., a sterile flask) as recited in claims 1, 39, and 40 in view of the prior art of Perlman and Peterson *et al.*. One having ordinary skill in the art would have been motivated to do so because the simple substitution of one kind of culture container (ie., the culture container taught by Perlman) from another kind of culture container (ie., the culture container such as a sterile flask taught by Peterson *et al.*,) during the process of performing the methods recited in claims 1, 39, and 40, in the absence of convincing evidence to the contrary, would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made since the culture container taught by Perlman and the culture container such as a sterile flask taught by Peterson *et al.*, are used for the same purpose (ie., culturing microorganisms).

Furthermore, the motivation to make the substitution cited above arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making the obviousness rejection comes from the M.P.E.P. at 2144.06, 2144.07 and 2144.09.

Also note that there is no invention involved in combining old elements is such a manner that these elements perform in combination the same function as set forth in the prior art without giving unobvious or unexpected results. *In re Rose* 220 F.2d. 459, 105 USPQ 237 (CCPA 1955).

19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.*, as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above, and further in view of McCabe (US Patent No. 5,593,829, filed on May 3,1994).

The teachings of Perlman and Peterson *et al.,* have been summarized previously, *supra.*

Perlman and Peterson *et al.,* do not disclose that the biological sample comprises a plant sample, a food sample, a gut sample, a salivary sample, a blood sample, a sweat sample, a urine sample, a spinal fluid sample, a tissue sample, a vaginal swab, a stool sample, an amniotic fluid sample or a buccal mouthwash sample as recited in claim 7.

McCabe teaches that biological sample can be blood or blood serum, lymph, ascites fluid, urine, microorganism or tissue culture medium, cell extracts (see column 14, lines 19-26).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claims 7 using the biological sample comprising a blood sample in view of the prior art of Perlman, Peterson *et al.,* and McCabe. One having ordinary skill in the art would have been motivated to do so because the simple substitution of one kind of biological sample (ie., the microorganisms from agricultural or industrial environments taught by Perlman) from another kind of biological sample (ie., the blood sample taught by McCabe) during the process of performing the method recited in claim 7, in the absence of convincing evidence to the contrary, would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made since both the microorganisms from agricultural or industrial environments taught by Perlman and the blood sample taught by McCabe are used as biological samples and are exchangeable.

Furthermore, the motivation to make the substitution cited above arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making the obviousness rejection comes from the M.P.E.P. at 2144.06, 2144.07 and 2144.09.

Also note that there is no invention involved in combining old elements is such a manner that these elements perform in combination the same function as set forth in the prior art without giving unobvious or unexpected results. *In re Rose* 220 F.2d. 459, 105 USPQ 237 (CCPA 1955).

20. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.,* as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above, and further in view of Knazek *et al.,* (US Patent No. 3,883,393, published on May 13, 1975).

The teachings of Perlman and Peterson *et al.,* have been summarized previously, *supra.*

Perlman and Peterson *et al.,* do not disclose that the growth column comprises a capillary as recited in claim 11.

Knazek *et al.,* teach to culture cells in a growth column (ie., the cell culture unit 11) comprising a capillary (see Figures 1 and 2).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claim 17 using a growth column (ie., the cell culture unit 11) comprising a capillary in view of the prior art of Perlman, Peterson *et al.,* and Knazek *et al.*. One having ordinary skill in the art would have been motivated to do so because a growth column (ie., the cell culture unit 11) comprising a capillary has following advantages: (1) "cells suspended in nutrient medium are initially allowed to settle onto the outer surface of capillaries through which oxygenated nutrient medium continuously flows. Nutrient substances pass from the perfusing medium through the capillary wall and into the cell, while cell products, e.g., lactic acid and hormones, pass from the cell through the capillary wall and into the perfusate. These products may be recovered by suitable means"; and

(2) "the retrieval from the culture of products of the cells grown on the capillaries while the culture itself remains undisturbed" (see Knazek *et al.*, column 2). One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to perform the method recited in claim 17 using a growth column (ie., the cell culture unit 11) comprising a capillary in view of the prior art of Perlman, Peterson *et al.*, and Knazek *et al.*.

21. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.*, as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above, and further in view of Sexena (US Patent No. 4,833,083, published on May 23, 1989).

The teachings of Perlman and Peterson *et al.*, have been summarized previously, *supra*.

Perlman and Peterson *et al.*, do not disclose that the growth column comprises a chromatography column as recited in claim 20.

Sexena teaches to culture cells in a growth column comprising a chromatography column (ie., bioreactor) (see columns 7 and 8).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claim 20 using a growth column comprising a chromatography column (ie., bioreactor) in view of the prior art of Perlman, Peterson *et al.*, and Sexena. One having ordinary skill in the art would have been motivated to do so because a growth column comprising a chromatography column (ie., bioreactor) has following advantages: "(1) increased surface area for cell growth or enzyme adsorption as the case may be; (2) uniform distribution of reaction medium; (3) radial or horizontal flow of the medium; (4) ease of production scale-up; (5) low pressure drop; (6) high

flow rates; and (7) increased product recovery" (see Sexena, column 7, lines 25-44). One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to perform the method recited in claim 20 using a growth column comprising a chromatography column (ie., bioreactor) in view of the prior art of Perlman, Peterson *et al.*, and Sexena.

22. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.*, as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above, and further in view of Weaver *et al.*, (US Patent No. 4,959,301, published on September 25,1990).

The teachings of Perlman and Peterson *et al.*, have been summarized previously, *supra*.

Perlman and Peterson *et al.*, do not disclose that sorting an encapsulated microcolony by size comprises using flow cytometry as recited in claim 29.

Weaver *et al.*, teach that sorting microdroplets comprising an encapsulated microcolony by size comprises using flow cytometry as recited in claim 29 (see column 14, lines 34-60, column 16, lines 29-61, column 21, lines 45-67, column 22, lines 1-43, and column 30, lines 21-40).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claim 29 wherein sorting microdroplets comprising an encapsulated microcolony by size comprises using flow cytometry in view of the prior art of Perlman, Peterson *et al.*, and Weaver *et al.*. One having ordinary skill in the art would have been motivated to do so because Weaver *et al.*, suggest that the better way for measurement of microdroplets is optical means in the form of flow cytometry

(see column 21, lines 45-67 and column 22, lines 1-43). One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to sort microdroplets comprising an encapsulated microcolony by size using flow cytometry.

23. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.*, as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above.

The teachings of Perlman and Peterson *et al.*, have been summarized previously, *supra*.

Peterson *et al.*, further teach that the microdroplet is isolated by FACS (see column 43, lines 10-35 and column 44, lines 1-21).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claim 30 wherein the gel microdroplet is isolated by FACS in view of the prior art of Perlman and Peterson *et al.*. One having ordinary skill in the art would have been motivated to do so because Peterson *et al.*, have successfully screened ands isolated positive microdroplets using FACS (column 43, lines 10-35 and column 44, lines 1-21). One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to isolate gel microdroplet by FACS.

24. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Peterson *et al.*, as applied to claims 1-6, 8-13, 15, 16, 24-28, 39, and 40 above.

The teachings of Perlman and Peterson *et al.*, have been summarized previously, *supra*.

Peterson *et al.*, further teach maintaining the isolated cell by re-encapsulating and re-culturing the isolated cell as recited in claim 31 and re-culturing the isolated microdroplet under the same or different conditions (see column 34, second paragraph).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have performed the method recited in claims 31 and 34 by maintaining the isolated cell by re-encapsulating and re-culturing the isolated cell and re-culturing the isolated gel microdroplet under the same or different conditions in view of the prior art of Perlman and Peterson *et al.*. One having ordinary skill in the art would have been motivated to do so because re-encapsulating and re-culturing the isolated cell and re-culturing the isolated gel microdroplet would make more microdroplets for storage and later uses. One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to re-encapsulate and re-culture the isolated cell and re-culture the isolated gel microdroplet in order to make more microdroplets for storage and later uses in view of the prior art of Perlman and Peterson *et al.*.

Conclusion

25. No claim is allowed.

26. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571)273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571)272-0735.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

November 27, 2006

FRANK LU
PRIMARY EXAMINER